

REMARKS

Claims 10-31 are currently pending in the above-referenced application.

Claims 10-31 stand rejected under 35 U.S.C. §112, first paragraph, on the grounds that the term “focal distance” is not described in the specification in a way as to reasonably convey to one skilled in the art that the inventor had possession of the claimed invention. These claims also stand rejected under 35 U.S.C. §112, second paragraph, on the grounds that this term is unclear.

Claims 10-18, 20 and 24-30 stand rejected under 35 U.S.C. §103(a) as unpatentable over Japanese patent document JP 10-255019 (“JP 10-255019”) in view of a Kodak Reference Handbook.

Claims 19 and 21-23 stand rejected under 35 U.S.C. §103(a) as unpatentable over the JP 10-255019 and the Kodak Reference Handbook, in further view of European patent document EP 454516 (“EP 454516”).

Claim 31 stands rejected under 35 U.S.C. §103(a) as unpatentable over JP 10-255019 and the Kodak Reference Handbook, in further view of Japanese patent document JP4-164281 (“JP 4-164281”).

In addition to the foregoing rejections, a number of objections were entered to the specification, drawings and claims. The remarks presented in paragraphs 1 and 2, below, address each of the specification and claim objections, and in doing so will address § 112 concerns regarding the definition of the terms “focal distance” and “differential contrast evaluation.”

1. Specification Objections:

Specification Objection A: With regard to the assertion that the first paragraph should indicate whether the international application was published under PCT Article 21(2) in English, the Applicant respectfully submits that this is not a requirement under 37 C.F.R. § 1.78(a)(2) or § 202.01 of the MPEP.

Accordingly, withdrawal of this objection is requested.

Specification Objection B (“focal distance”): For purposes of examination, the pending Office Action assumes that the term “focal distance” corresponds to the term “focal length,” a standard term in photography referring to the distance from a camera lens to a focal point (*e.g.*, a point on a plane at which light focuses on a recording medium). The Applicant respectfully submits that this understanding is inconsistent with the teachings of the present specification, which consistently refers to distances from the camera extending outward from the front of the vehicle.

Throughout the specification, reference is consistently made to detecting or perceiving objects at a distance in front of the vehicle. For example, in discussing the “different focal distances” in the present invention in paragraph [0009], the specification notes that the infrared camera “takes over the environmental detection in the remote range because it is suitable for day and night use and is free from the effects of blinding [from oncoming vehicle headlights].” This paragraph goes on to note that the CCD camera is adjusted to operate in a “close range,” which is defined as the range of the vehicle’s headlights. Application at [0009] (“such that it operates in a range which is

illuminated by the front headlights when the vehicle headlights are switched on”).

Similarly, paragraph [0010] defines the infrared camera detection range as encompassing “the extended area in front of the driver environment” (*i.e.*, front of the area that is monitored by the CCD camera). Paragraph [0011] is consistent, referring to “camera systems with different focal distances” and improving detection “in both the close and remote ranges.”

The present specification thus defines “focal distance” in terms of distance from the camera *to a target range in front of the motor vehicle*, not the distance from the camera lens back to the focal point at which an image is deposited. The Applicant further notes that the “focal distance” is not a reference to a specific distance but rather a range of distance, as illustrated in Figure 1, where the CCD camera coverage is indicated as close-in area A and the infrared camera coverage supplements the CCD coverage over an extended area B in front of the vehicle. *See also* Application at ¶¶ [0016], [0017].

In view of the foregoing the Applicant submits that the term “focal distance,” is adequately defined by the present specification, and therefore respectfully requests withdrawal of the pending specification.

Specification Objection C: With regard to the term “differential contrast evaluation,” the Office Action states that this term is objected to as unclear and inadequately explained. The Applicant respectfully submits that this term is well understood in the art, and requires no further definition. To this end, the

Applicant has attached examples of references to this well known image enhancement technique retrieved from the Internet following a brief search.

The Applicant respectfully submits that these materials support Applicant's position that image processing to improve the perception of objects and details using differences in contrast is well known in the art (indeed, as shown in some of the attached materials, software to perform such evaluations is commercially available), and that therefore one of ordinary skill in the art would readily understand (and be able to implement without undue experimentation) what is being taught in the present specification. Accordingly, the Applicant respectfully requests the pending objection to the specification and the related objection to claims 19 and 21-23 be withdrawn.

2. Claim Objections:

The pending Office Action notes that claims 21 and 23 are identical. September 4, 2003 Office Action at 3. Claim 21 depends from claim 18 and claim 23 depends from claim 19. The Applicant respectfully submits that because claim 19 contains an additional limitation not found in claim 18 (*i.e.*, claim 19's recitation of an "analyzing device"), claims 21 and 23 do not recite identical subject matter. The Applicant respectfully requests the pending objection be withdrawn.

3. The Pending § 112 Rejections Should Be Withdrawn.

The Applicant respectfully traverses the rejection of claims 10-31 under § 112, first paragraph on the grounds that, as noted above, the term "focal distance" is adequately described in the specification to reasonably convey that

the inventor had possession of the claimed invention at the time the application was filed. The Applicant further submits that this term is adequately defined in the specification for purposes of § 112, second paragraph. Reconsideration and withdrawal of the pending §112 rejections is respectfully requested.

4. The Claims Are Patentable Over The References Under § 103.

The Applicant respectfully traverses the rejection of claims 10-18, 20 and 24-30 as unpatentable under § 103 over JP 10-255019 in view of the Kodak Reference Handbook, on the grounds that these references fail to teach or suggest the claimed invention. The Applicant further traverses the rejection of claims 19 and 21-23 as unpatentable over these references in further view of EP 454516, and claim 31 as unpatentable over these references in further view of JP 4-164281, on similar grounds.

The September 4, 2003 Office Action sets forth arguments in support of the § 103 rejections based on the understanding of the term “focal distance” as referring to the distance between the camera lens and the point at which an image is focused on the recording medium. September 4, 2003 Office Action at 8-12. As noted above, however, the specification defines the term “focal distance” in an entirely different manner (referring to distance ranges extending out in front of the vehicle). The Applicant respectfully submits that JP 10-255019 and the Kodak Reference Handbook, alone or in combination, neither teach nor suggest the present invention’s combination of two cameras operating in different spectral ranges and at different focal distances to obtain improved imaging performance, as described in the specification and Applicant’s July 22,

2003 Remarks. Further, as noted in the July 22, 2003 remarks, the present invention's novel use of cameras operating in different spectral regions and the focused at different focal distances is completely different than the approach in JP 10-255019, which teaches away from the present invention by having its two cameras focused at approximately the same distance. Similar teachings or suggestions of focus at the same distance are found in the remaining cited references. Thus, there is no teaching or suggestion in the identified art for the invention recited in claims 10-31.

Because the cited references, either alone or in combination, do not teach or suggest all of the features of independent claims 10 and 24 and their respective dependent claims, claims 10-31 are patentable over the cited references under § 103. Accordingly, the Applicant respectfully requests the pending §103(a) rejections be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing remarks, the Applicant respectfully submits that claims 10-31 are patentable over the cited references. The Applicants therefore respectfully requests issuance of a Notice of Allowance for these claims.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and

please charge any deficiency in fees or credit any overpayments to Deposit

Account No. 05-1323 (Docket #951/50488).

Respectfully submitted,

December 4, 2003



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